Forestland Interpretations

Forestland interpretations are important to good management. The management of trees begins with an understanding of the soil where they grow or are to be grown. Some soils are very suitable for growing wood crops; others barely support tree cover. Different tree species may vary in production on the same soil.

Forestland interpretations should be used to assist land users in planning, installing, and maintaining forestland management systems.

Forest Management and Productivity

The Forestland Management and Productivity tables presents information about suitable for producing timber for each soil map unit. Management concerns, which include hand planting, mechanical planting, use of harvesting equipment, mechanical site preparation (surface), roads (natural surface), erosion on roads and trails, off-road/trail erosion, soil rutting, log landings, seedling survival, are listed by ratings of:

- Not Limited (0.00)
- Slightly Limited (0.01 to 0.30)
- Moderately Limited (0.31 to 0.60)
- Limited (0.61 to 0.99)
- Very Limited (1.00)

Information on potential productivity includes plant competition, common trees, site index, productivity class, and trees to plant.

Management Concerns

PLANT COMPETITION - A rating of slight indicates little or no competition from other plants; moderate indicates that plant competition is expected to hinder the development of the fully stocked stand of desirable trees; and severe means that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

POTENTIAL PRODUCTIVITY - This is discussed under the ordination class symbol.

COMMON TREES - Trees that generally occur on the soil are listed regardless of economic importance.

SITE INDEX AND PRODUCTIVITY CLASS - These are discussed under ordination class symbol.

TREES TO PLANT - Trees that are suitable for commercial wood production and that are adapted to the soil.

HAND PLANTING – ratings are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, a water table, and ponding. Ratings indicate the expected difficulty of hand planting, which includes the proper placement of root systems of tree seedlings to a depth of up to 12 inches, using standard hand planting tools. It is assumed that necessary site preparation is completed before seedlings are planted.

MECHANICAL PLANTING – ratings are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, a water table, and ponding. Ratings indicate the expected difficulty using a mechanical planter, which includes proper placement of root systems of tree seedlings to a depth up to 12 inches. It is assumed that necessary site preparation is completed before seedlings are planted.

USE OF HARVEST EQUIPMENT – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, and ponding. Ratings indicate the suitability for operating harvest equipment for off –road transport or harvest of logs and/or wood products by ground-based wheeled or tracked equipment.

MECHANICAL SITE PREPARATION (SURFACE) – ratings are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, a water table, and ponding. The part of the soil from the surface to a depth of about 12 inches is considered in the ratings. Ratings indicate the suitability of using surface-altering soil tillage equipment to prepare the site for planting or seeding.

ROADS (NATURAL SURFACE) – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads on which trucks transport logs and other wood products from the site.

EROSION (**ROAD/TRAIL**) – ratings are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails.

EROSION (OFF-ROAD/OFF-TRAIL) – ratings are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

SOIL RUTTING – ratings are based on a water table, rock fragments on or below the surface, surface texture, depth to a restrictive layer, and slope. Ratings indicate the hazard or risk of ruts in the uppermost soil surface layers by operation of forest equipment. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.

LOG LANDINGS – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, ponding, flooding, and the hazard of soil slippage. Ratings indicate the suitability of the soil at the forest site to serve as a log landing and allows the efficient and effective use of equipment for the temporary storage and handling of logs.

SEEDLING SURVIVAL – ratings are based on flooding, ponding, a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. Ratings indicate the impact of soil, physiographic, and climatic conditions on the survivability of newly established tree seedlings.

See the National Forestry Manual, Subpart B for criteria used in rating management concerns.

This subsection includes:

• (a) Forest Management (one or two tables)

Woodland Management and Productivity

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

		Management concerns					Potential productivity				
Map symbol and	Ordi-	l	Equip-	l	l	[]	l	l]	
soil name	•	Erosion		Seedling	:	Plant	Common trees	:	:	Suggested trees	
	symbol	hazard	:	mortal-	throw	competi-		index	of wood	to plant	
	l		tion	ity	hazard	tion	<u> </u> 	ļ	fiber	<u> </u>	
	 	l I	 	 	 		l I	 	<u>m3/ha</u>	İ	
15000:	l I	l i	l i	 	 		l İ	 	l I	İ	
BASEHOR	l 2D	 Slight	 Slight	 Moderate	l Severe	 Slight	 common hackberry	l 45	! 	 eastern	
	i						green ash	:	2	redcedar,	
	i	İ	İ	i	İ		northern red oak	!	2	shortleaf pine	
	į	İ	į	j	İ		white oak	35	2	İ	
15001:							[
BASEHOR	2R	Severe	Moderate	Moderate	Severe	Slight	common hackberry	:	•	black oak,	
	!	l		!	 		green ash	!	2	common	
	l I	l I	 	 	l I		northern red oak white oak	•	2 2	hackberry	
	i i	l İ	i	i i	l İ		wince oak	33 	, <u>~</u> 	! 	
15002:	i	i	i	i	! 			i	i		
MCGIRK	3w	Slight	Severe	Moderate	Moderate	Severe	white oak	55	3	eastern	
	ĺ	ĺ	ĺ	ĺ	ĺ		green ash	i	i	cottonwood,	
							pecan			green ash,	
							[pecan, pin oak,	
	ļ		ļ					!	ļ	sweetgum	
40001 -	 	l i		 	 		 	 	 	l I	
40001: BOLIVAR	l I 3D	 Slight	 Slight	 Slight	 Moderate	 cliah+	 black oak	l 56	 3	 green ash,	
BOLIVAR	יעכן ו	lerranc	lerranc	l Pridir	MOGELACE		black walnut		3 	green asn, shortleaf pine,	
	i i	l I	i	i i	l İ		northern red oak	!	l 4	white oak,	
	i	! 	i	i	! 		white oak	•	-	black oak	
	i	İ	İ	İ	İ			i	İ		
46000:	İ	İ	į	j	j	İ	İ	İ	İ	j	
HUMANSVILLE	9₩	Slight	Moderate	Moderate	Slight	Severe	eastern cottonwood	100	9	eastern	
							sycamore	:		cottonwood,	
	ļ		ļ				silver maple			silver maple,	
		l			 					pecan	
66000:	l I	l i	l i	 	l i		l İ	 	l I	İ	
MONITEAU	 4W	 Slight	Severe	 Moderate	 Moderate	 Severe	 pin oak	I I 70	l I 4	 eastern	
1101121210							silver maple	•		cottonwood,	
	i	İ	İ	i	İ		eastern cottonwood	:	i	green ash, pin	
	İ	İ	İ	į	İ		green ash	i	i	oak, silver	
										maple	
							[
66001:						 			-		
DAMERON	5A.	Slight 	Slight	Slight	Slight 	Moderate	green ash	:	5 	black walnut,	
	l I	l i	 	 	l I		American sycamore		!	green ash,	
	! !	 		:] 		black walnut white oak		 	pecan 	
	i	! 	i	i	! 			İ	i	 	
70002, 70003:	İ	İ	į	İ	İ	į	j	İ	İ		
ALSUP	2A	Slight	Slight	Slight	Slight	Slight	black oak	51	2	black oak,	
	l						northern red oak	•	4	northern red	
	!			ļ			white oak	ļ	ļ	oak, white oak	
	ļ			ļ				ļ	ļ		
T0004		 cliabe	 Slight	 	 c1;ab=	 c1	 black oak	 E1	 2	 black ost	
70004:			LOT LUMB.	LOTTABLE	Slight	DITABLE	DIACK OAK	51	2	black oak,	
70004: ALSUP	2R 	l	I	<u>5</u>	i	i	northern red oak	70	4	northern red	
	2R 			 	 	j I	northern red oak white oak	•	4	northern red	

See footnote at end of table.

Woodland Management and Productivity--Continued

soil name		Erosion	Equip- ment	 Seedling		ļ			[
0005:			ment	00041450						
0005:	symbol	l harand	:		:	Plant		:	:	Suggested trees
	l	liazard	limita-	:	:	competi-		index	of wood	to plant
			tion	ity	hazard	tion		<u> </u>	fiber	
	 	l İ	 	l I	l İ	 	<u> </u>	l I	<u>m3/ha</u> 	İ
OT THEWE		 	 	! 	 	! 		İ	<u> </u>	
Profite	2A	Slight	Slight	Slight	Slight	Moderate	eastern redcedar	35	2	eastern
							blackjack oak			redcedar,
ļ			ļ			ļ	post oak			post oak
 MOKO	l I 2x	 Slight	 Moderate	 Moderate	 Severe	 Slight	 eastern redcedar	l 30	 2	 eastern
	i i								i -	redcedar
	! !		!			!			ļ	
0007: CLIQUOT	 317	 Slight	 Moderate	 Slight	 Slight	 Moderate	 black oak	l l 55	 3	 black oak,
		5		5	J	:	eastern redcedar	:		eastern
	i	¦ 	i	i	¦ 	:	post oak		!	redcedar,
j	j i	İ	į	İ	İ	į	i ⁻	İ	į	shortleaf pin
0008, 70009:	 	 		 	 	 	1	l i	 	
OSS	 3F	 Slight	 Slight	 Moderate	 Slight	 Slight	 white oak	 60	 3	 white oak,
	j i	İ	į -	İ	İ	į	post oak	i	j	black oak,
j	j j	İ	İ	İ	İ	İ	black oak	i	j	shortleaf pin
))))		İ		 i	l I	 			 	
0010: 30SS	l 3r.	 Slight	 Moderate	 Moderate	 Slight	 Slight	 white oak	l 60	l 3	 white oak,
	i		i		İ		post oak	•	i	black oak,
j	j i	İ	į	İ	į	İ	black oak	i	i	shortleaf pin
0011:		İ		l i	l i	 				
30ss	 3r.	 Moderate	 Moderate	 Moderate	 Slight	 Slight	 white oak	l 60	 3	 white oak,
	i	İ	i	İ	i		post oak		i	black oak,
j	į	ĺ	į	ĺ	İ	į	black oak		į	shortleaf pine
MOKO	 ar	 eliabe	 Moderate	Moderate	Corroro	 Slight	 eastern redcedar	 30	 2	 eastern
JORO	ZK 	 	Moderace	Moderace	 pevere	 	eastern redecar	30 	2	redcedar
j	į	ĺ	į	ĺ	İ	į		İ	į	
0012: HOBERG	25	 c]:ab=	 cliabe	 c1 i⇔b+	 Wodowsto	 cliabe	lubita colo	 60		
HOBERG	ן ענ ן	Siignt	Slight 	SIIGNE	Moderate 		white oak black oak		•	white oak, black oak,
	 	! 	i İ	! 	 	!	shortleaf pine			shortleaf pin
j	j j	İ	İ	İ	İ	İ	į	İ	İ	į
0013:	 2v	 c]:ab=	 Wodowsto	 Modernto	Corromo	 cliabe	langtarm radgadan	20		 eastern
MOKO	2X 	Slight 	Moderate 	Moderate 	Severe	SIIGNE 	eastern redcedar	30 	2 	redcedar
	i i	İ	i	İ	İ	İ		İ	į	
0014:			!							
MOKO	21R 	Slight 	Moderate	Moderate 	Severe 	Slight 	eastern redcedar	30 	2 	eastern redcedar
			İ			<u> </u>		İ	İ	
ROCK OUTCROP.	ļ		ļ	ļ		ļ			ļ	
0015 :	 	[[]]	 	 	İ
OUIS: PEMBROKE	 3A	l Slight	 Slight	l Slight	l Slight	l I	 white oak	l 60	l I 3	black walnut,
	JA	 	 -	 	 	•	black oak	•		white oak
į	ļ į	l	ļ	ļ	l	ļ		ļ	ļ.	
3000: POMME	 3A	 gliah+	 slight	 gliah+	 Slight	Moderato	northern red oak	 65	 3	 black weleu+
	JA	Slight 	Slight 	 orranc	l Prianc	•	white oak		:	black walnut, shortleaf pine
	 	! 	! 	! 	I 	! 		l 33	, ,	white oak

See footnote at end of table.

Woodland Management and Productivity--Continued

		ļ		ement con	cerns	erns Potential			ty		
Map symbol and soil name	:	Erosion	Equip- ment limita- tion	 Seedling mortal- ity	 Wind- throw hazard	 Plant competi- tion	:	:	 Volume* of wood fiber	 Suggested trees to plant	
73002:	 	 			 	 	 	 	<u>m3/ha</u> 		
OCIE	3F 	Slight 	Slight 	Moderate 	Slight 		black oak northern red oak white oak	j	j	northern red oak, shortleaf pine	
GATEWOOD	 2A 	 Slight 	 Slight 	 Slight 	 Slight 	 Moderate 	 black oak eastern redcedar post oak white oak	40 43	3 2	eastern redcedar, shortleaf pine	
73003: OCIE	 3R 	 Slight 	 Moderate 	 Moderate 	 Slight 		black oak northern red oak white oak	j	!	northern red oak, shortleaf pine	
GATEWOOD	 2R 	 Slight 	 Moderate 	 Slight 	 Slight 	 Moderate 	black oak eastern redcedar post oak white oak	40 43	3 2	eastern redcedar, shortleaf pine	
73004: OCIE	 3R 	 Slight 	 Moderate 	 Moderate 	 Slight 		 black oak northern red oak white oak	j	j	northern red oak, shortleaf pine	
73005: OCIE	 3F 	 Slight 	 Slight 	 Moderate 	 Slight 	 Slight 	black oak northern red oak white oak	j	i	northern red oak, shortleaf pine	
73006: PERIDGE	 4A 	 slight 	 Slight 	 slight 	 slight 	:	northern red oak black walnut eastern redcedar white oak	 50	 4 4 	black walnut, northern red oak, white oak	
73007: PLATO	 3D 	 Slight 	 Slight 	 Slight 	 Moderate 	 Slight 	 black oak white oak 	:	:	black oak, post oak, shortleaf pine	
73008, 73009: VIRATON	 3D 	 Slight 	 Slight 	 Moderate 	 Moderate 	 Slight 	 black oak white oak 	•	:	black oak, shortleaf pine, white oak	
73010: WILDERNESS	 3D 	 slight 	 Slight 	 Moderate 	 Moderate 	:	 black oak northern red oak white oak	64	j 3	black oak, shortleaf pine, white oak	
74625: HARTVILLE	 3C 	 Slight 	 Slight 	 Severe 	 Severe 	 Slight 	 white oak 	 55 	 3 	eastern cottonwood, pin oak, tuliptree	

See footnote at end of table.

Woodland Management and Productivity--Continued

		Management concerns					Potential produ	[
Map symbol and	Ordi-		Equip-					l	I	
soil name	nation	Erosion	ment	Seedling	Wind-	Plant	Common trees	Site	Volume*	Suggested trees
	symbol	hazard	limita-	mortal-	throw	competi-	İ	index	of wood	to plant
	İ	İ	tion	ity	hazard	tion	İ	ĺ	fiber	ĺ
					l		<u> </u>	 	m3/ha	l
75375:				!	ļ	ļ				
							 pin oak	04	-	
HORSECREEK	DA	Slight	Slight	Slight	Slight	Moderate	American elm	•		black walnut,
	!			!	 -	!				eastern
	!		!	!	!	!	American sycamore	•	•	cottonwood,
	!	!	!	!	!	!	Shumard's oak	•	•	tuliptree,
	!	!	!	!	!	!	common hackberry		!	white ash
	!	!	!	!	!	!	hickory			
	l I	 	 		l I	l i	white ash		 	
75376:		i	<u> </u>	i	<u> </u>	i	 	¦	i	
CEDARGAP	3F	Slight	Slight	Moderate	Slight	Moderate	black oak	66	3	black oak,
	1	1		1		1	black walnut			green ash
	į	ĺ	į	ļ	ĺ	į	green ash		ļ	į
75377:	 	 	 	 	l I	l I	 	 	 	
RACKET	5a	Slight	Slight	Slight	 Sliaht	Moderate	American sycamore	i	i	black walnut,
	i	j	i		j	i	black cherry	•	•	northern red
	i	i	i	i	i	i	black walnut	•		oak, white ash,
	i	i	i	i	i	i	northern red oak			tulip poplar
	i	į	i	i	j	i	white ash	i	i	İ
FF3F0				!	ļ	ļ				
75378:		landar.	l and a decident		landar.		 	l 00		 •
STURKIE	6W	Slight	Slight	Moderate	PIIGUT	Severe	American sycamore	•		American
	!	ļ		1	ļ		eastern cottonwood	•	!	sycamore, black
	!		ļ			!	northern red oak	•		walnut, eastern
	ļ.	ļ	ļ.	!	!	ļ.	white oak	70	4	cottonwood,
	!	!	ļ.	!	!	!		!	!	northern red
	ļ	!	ļ.	!	!	!	<u> </u>	!	!	oak
	<u> </u>	<u> </u>	L	<u></u>	l	<u> </u>	l	L	L	l

 $[\]star$ Volume is the yield in cubic meters per hectare per acre per year calculated at the age of culmination of mean annual increment for fully stocked natural stands.